



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,614	11/14/2003	Robert J. Nolan	0011388.00274	2513
21878	7590	11/14/2005	EXAMINER	
KENNEDY COVINGTON LOBDELL & HICKMAN, LLP 214 N. TRYON STREET HEARST TOWER, 47TH FLOOR CHARLOTTE, NC 28202			CLEVELAND, MICHAEL B	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/713,614	Applicant(s) NOLAN ET AL.	
	Examiner Michael Cleveland	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) 43-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 and 56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>111403</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in the reply filed on 9/28/2005 is acknowledged. The traversal is on the ground(s) that there would be no serious burden on the examiner. This is not found persuasive because a serious burden exists in the differing issues likely to arise during the prosecution of the different inventions.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 43-55 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 9/28/2005.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitation "the cooling step" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for

Art Unit: 1762

patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-14, 19-22, 24-28, 30-32, 36, and 56 are rejected under 35 U.S.C. 102(e) as being anticipated by Dupont (U.S. Patent 6,452,325, hereafter '325).

'325 teaches a method of coating an article having opposing ends (fluorescent lamp (10)), the method comprising the steps:

- a) loading the article on a coating conveyor system (col. 3, lines 54-65);
- b) feeding the article to a coating station, which includes an article coating machine (col. 3, lines 24-27);
- c) applying a coating to the article at the coating station (col. 3, lines 24-27); and
- d) conveying said article to a stacking and/or packaging station (col. 4, lines 14-17).

Claim 2: Excess coating is removed from the ends of the article (col. 4, lines 1-10).

Claims 3-5, 19-21, 41: A plurality of articles is loaded to form a chain of articles with gaps therebetween, and the coating is applied to the chain and gaps to connect the sequentially coated light tubes (Fig. 8; col. 4, lines 59-65). Each article is separated after the coating step (col. 4, lines 66-67).

Claims 6, 11, 38: The coated bulb is cooled below the softening point of the thermoplastic material (col. 2, lines 7-11).

Claims 7, 13, 38: A vacuum is applied during the coating process (col. 3, lines 40-41).

Claims 8, 12, 14, 38: The end caps are pre-heated with an infrared heater before the loading step (col. 4, lines 33-58).

Claim 9: The coating step extrudes a molten thermoplastic material (col. 3, lines 35-38).

Claims 10, 38, 56: The articles are fluorescent tubes (10) having opposing end caps (15). They are conveyed sequentially in longitudinal alignment with one another (Figs. 2, 8). The coating extrudes molten thermoplastic material around each tube substantially in direct intimate contact with the tube (col. 3, lines 41-45).

Claims 22, 36, 38, 40: The coated tubes are taken up by rolls to draw them away from the extruder. The coating thins, indicating that the leading lamp must be accelerated away from the trailing lamp (col. 3, lines 60-64).

Art Unit: 1762

Claims 24-28, 39: One of ordinary skill in the art would have understood that a process of the complexity that requires the coordination of simultaneously performing the large number of operations of '325 would have been controlled by a computer (i.e., automatically).

Claims 30-32: The thickness of the coating may be about 16 mil (col. 5, lines 19-24).

7. Claims 1-7, 9-11, 13, 15-16, 18-21, 24, 26-27, 30, 33, 36-37, and 56 are rejected under 35 U.S.C. 102(e) as being anticipated by Payne (WO02/16049, hereafter '049).

'049 teaches a method of coating an article having opposing ends (fluorescent lamp (40)), the method comprising the steps:

- a) loading the article on a coating conveyor system (Figs. 13-14);
- b) feeding the article to a coating station, which includes an article coating machine (p. 7, lines 4-5);
- c) applying a coating to the article at the coating station (p. 6, lines 15-26); and
- d) conveying said article to a stacking and/or packaging station (p. 9, lines 10-12).

Claim 2: Excess coating is removed from the ends of the article (p. 7, line 27-p. 8, line 3).

Claims 3-5, 19-21: A plurality of articles is loaded to form a chain of articles with gaps therebetween, and the coating is applied to the chain and gaps to connect the sequentially coated light tubes (p. 7, lines 6-21). Each article is separated after the coating step (p. 7, line 27-p. 8, line 3).

Claims 6, 11: The coated bulb is cooled (p. 7, lines 20-21) below the softening point of the thermoplastic material to provide a coating which has impact and shatter resistance (p. 1, lines 15-18).

Claims 7, 13: A vacuum may be applied during extrusion (p. 6, lines 16-17).

Claim 9: The coating step extrudes a molten thermoplastic material (p. 2, lines 27-29).

Claims 10, 56: The articles are fluorescent tubes (40) having opposing end caps (45). They are conveyed sequentially in longitudinal alignment with one another. The coating extrudes molten thermoplastic material around each tube substantially in direct intimate contact with the tube (p. 7, lines 6-21).

Art Unit: 1762

Claim 15: The lamp is impelled before loading by bringing it to the apparatus and afterwards by conveying it to a packing station.

Claim 16: The coating is cooled with an air knife (p. 7, lines 20-21).

Claims 22, 36: The coated tubes are taken up by rolls to draw them away from the extruder. The coating thins, indicating that the leading lamp must be accelerated away from the trailing lamp (col. 3, lines 60-64).

Claims 24, 26, 27: '049 teaches that tasks may be handled manually or automatically (p. 9, lines 10-12 (i.e., automatically)).

Claim 30: The thickness of the coating may be 11 mil (p. 8, lines 7-8).

Claim 33: The separation may be about 0.6 inches (p. 8, lines 26-28).

Claims 36-37: The lamps may travel at 49 ft/min (p. 8, lines 8-9).

8. Claims 1, 3-4, and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Nolan (U.S. Patent 4,499,850, hereafter '850).

'850 teaches a method of coating an article having opposing ends (fluorescent lamp (10)), the method comprising the steps:

- a) loading the article on a coating conveyor system (24);
- b) feeding the article to a coating station (30), which includes an article coating machine;
- c) applying a coating to the article at the coating station (col. 4, lines 6-24); and
- d) conveying said article to a stacking and/or packaging station (50) (Fig. 2, col. 3, lines 44-50, col. 8, lines 15-20). (Note: cooling is part of the act of preparing the bulbs for conventional handling, which includes packaging.)

Claims 3-4, 6: There may be a chain of articles and gaps (Figs. 2-4). The chain is cooled at station (50).

Claim 7: A vacuum may be used (col. 8, lines 18-20).

Claim 8: The article is preheated before loading it onto the area immediately preceding coater (30).

Art Unit: 1762

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 24-28 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont '325.

'325 is discussed above. It is the examiner's position that one of ordinary skill in the art would have understood that a process of the complexity that requires the coordination of simultaneously performing the large number of operations of '325 would have been controlled by a computer (i.e., automatically), but '325 does not explicitly so state. However, it has long been held that automating a manual activity is not sufficient to distinguish over the prior art (MPEP 2144.04.III).

Claims 33-35: '325 is silent as to the distance between end caps of sequential tubes. However, this distance would have been recognized as a result-effective variable because the amount of space between tubes affects the total amount of space required for the apparatus and the amount of excess polymer coating between tubes that is discarded, and the amount of safe room for the cutting process to separate the tubes. It has been held that the discovery of the optimum value of a result effective variable in a known process is ordinarily within the skill in the art. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

Art Unit: 1762

12. Claims 6, 11, 15-18, 26, and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont '325, as applied to claim 1, and further in view of Weingarten (U.S. Patent 3,706,216, hereafter '216).

'325 is discussed above. The lamp must inherently be impelled to bring it to the extruder. '325 does not explicitly teach that the lamp is impelled after cooling. However, '216 teaches that in extrusion processes, the extrusion coated articles may be impelled for further processing after being forcibly cooled (col. 4, line 56-col. 5, line 5), such as cutting. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have impelled the lamps of '325 after the desired cooling step for further processing such as cutting with a reasonable expectation of success because '216 teaches that such is a suitable order of operations for cooling and separating extrusion-coated lengths of material. The selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945).

Claim 16-18: As discussed above, '216 teaches that cooling with a water bath or with air are operative methods of cooling an extrusion coated substrate. therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have accomplished the cooling of '325 using a water bath or air with a reasonable expectation of success because '216 teaches that they are suitable methods of cooling extrusion coated substrates.

13. Claims 23, 29, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont '325, as applied to claim 1, and further in view of Dzyk et al. (U.S. Patent 5,532,549, hereafter '549).

'325 is discussed above. Excess coating is removed from the end caps of the lamps (col. 4, lines 1-10). '325 does not explicitly teach labeling the tubes. However, the examiner takes Official Notice that it is notoriously well known to label fluorescent lamps to provide useful information. See, e.g., '549, col. 9, lines 1-5. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have labeled the lamp of '325 with a reasonable expectation of success in order to have provided information to the consumer.

Art Unit: 1762

It is the examiner's position that one of ordinary skill in the art would have understood that a process of the complexity that requires the coordination of simultaneously performing the large number of operations of '325 would have been controlled by a computer (i.e., automatically), but '325 does not explicitly so state. However, it has long been held that automating a manual activity is not sufficient to distinguish over the prior art (MPEP 2144.04.III).

14. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont '325 in view of Weingarten '216, as applied to claim 38, and further in view of Duzyk '549 for substantially the same reasons give immediately above.

15. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont '325, as applied to claim 1, and further in view of Payne '049.

'325 is discussed above. It does not explicitly teach the rate at which the lamps are conveyed. '049 teaches that a suitable rate for linking together fluorescent lamp tubes with an extrudable coating is about 6-49 ft./min. (p. 8, lines 4-9). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used such a rate with a reasonable expectation of success because '049 teaches that it is a suitable rate for linking together fluorescent lamp tubes with an extrudable coating.

16. Claims 31-32 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Payne '049.

'049 is discussed above, but does not teach the preferred ranges of thickness or distance between lamps. However, it has been settled that a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). (MPEP 2144.05.I.) In this case, '049 attributes no particular advantage to the small claimed range of thickness and clearly indicates that a broader range is permissible. Likewise, the distance between bulbs is not indicated as critical. '049 teaches that smaller distances waste less material, but also indicates that material


Art Unit: 1762

may be recovered from the linkage members. One of ordinary skill in the art would have recognized that greater distance between the bulbs would have provided more clearance for the cutting procedure. For these reasons, one of ordinary skill in the art would have expected the close values of the preferred ranges to have the same properties as the disclosed ranges.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cleveland whose telephone number is (571) 272-1418. The examiner can normally be reached on Monday-Thursday, 7-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Michael Cleveland
Primary Examiner
Art Unit 1762

11/10/2005